AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-120

ANS is a free, weekly, news and information service of AMSAT North America,
The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in
designing, building, launching and communicating through analog and digital
Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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* Volunteers are needed to help at the AMSAT booth at Dayton. Gould *
* WA4SXM, is looking for volunteers to help man the AMSAT booth dur- *
* ing the 2012 Hamvention. People are needed all 3 days for 2 hour *
* shifts. Please send the days and times you are available to help *
* as well as how many shifts you are willing to work via e-mail to *
* wa4sxm at amsat.org. *
* Monitor http://www.amsat.org/amsat-new/hamvention/2012/Dayton.php *
* for the latest AMSAT at Dayton news and developments *
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ANS-120 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 120.01
From AMSAT HQ SILVER SPRING, MD.
April 29, 2012
To All RADIO AMATEURS
BID: $ANS-120.01

Reservations Required - 2012 AMSAT/TAPR Banquet at Dayton

The sixth annual joint AMSAT/TAPR Banquet will be held Friday evening, May 18, 2012 during the Dayton Hamvention.

The Banquet will be at the:

Kohler Presidental Banquet Center
4572 Presidential Way

Kettering, OH 45429
(just south of Dayton).

Reservations are required and must be made by Monday, 14 May 2012. Seating is limited, so make your reservations early. The price for the Banquet is $30 per person. Reserved tickets may be picked up at the AMSAT booth at Hamvention on Friday, or at the door.

You may make reservations for the 2012 AMSAT/TAPR Banquet online in the AMSAT Store: http://www.amsat-na.com/store/item.php?id0158

AMSAT Presidents Club Gold members should let Martha know if they are planning to attend the banquet. For additional information contact Martha at the AMSAT office (martha@amsat.org).

Banquet Schedule

+ 6:30 PM: Doors open and Cash bar is available with Beer, Wine, Liquor and soft drinks.

+ 7:15 PM: Buffet Dinner service begins. The Center has a justly deserved reputation for good food and service.

+ 8:15 PM: Presentation by Howard Long, G6LVB
Howard will be talking about his FUNcube Dongle, the 64 - 1700 MHz Software Defined Receiver. This innovative USB device is the size of a thumbdrive and has an SMA antenna socket. Multiple SDR control and display software programs can be used with the FUNcube Dongle.

[ANS thanks Gould Smith, WA4SXM for the above information]

AMSAT-NA Board of Directors Nominations

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A valid nomination requires either one current Member Society, or five current individual members in good standing, to nominate an AMSAT-NA member for the position.

Three directors and two alternate directors have terms expiring this year. The director seats open for election are held by Tom Clark, K3IO; Lou McFadin, W5DID; and Gould Smith, WA4SXM. The alternate director seats open for election are held by Mark Hammond, N8MH and Patrick Stoddard, WD9EWK.

The three nominees receiving the highest number of votes will be seated as regular board members with two year terms. The two nominees receiving the next highest number of votes will be seated as alternate directors for one year.

Written nominations, consisting of names, calls and individual signatures, should be mailed to: AMSAT-NA, 850 Sligo Ave #600, Silver Spring, MD, 20910. They must be received no later than June 15th. No other action is required.

Nominations may also be made by electronic means including e-mail, FAX, or electronic image of a petition. Electronic petitions should be sent to MARTHA@AMSAT.ORG or faxed to 301-608-3410, and also must be received by June 15th. If using any electronic submission, there

is a second, verifying step:

   ELECTRONIC SUBMISSIONS WITHOUT THIS SECOND, WRITTEN VERIFICATION
   ARE NOT VALID UNDER THE EXISTING AMSAT-NA BYLAWS. A verifying
   traditional written petition MUST be received at the AMSAT-NA
   office at the above address within 7 days following the close
   of nominations.

[ANS Thanks AMSAT Secretary Alan Biddle, WA4SCA for the above
  information]

AMSAT 2012 Symposium First Call for Papers

This is the first call for papers for the 2012 AMSAT Annual Meeting
and Space Symposium to be held in Orlando, Florida on the weekend of
October 26-28, 2012 at the Holiday Inn, Orlando Airport Hotel.

Proposals for papers, symposium presentations and poster presenta-
tions are invited on any topic of interest to the amateur satellite
community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

We request a tentative title of your presentation as soon as possible,
with final copy to be submitted by October 1 for inclusion in the
printed proceedings.

Abstracts and papers should be sent to Dan Schultz, N8FGV, at
n8fgv@amsat.org.

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations

+ Operating Techniques, News, & Plans from the Amateur Satellite World

+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers

+ Annual General Membership Meeting

+ Annual Banquet Keynote Speaker and Door Prizes

If you are interested in a Monday Trip (October 29) to the Kennedy
Space Center please contact Martha via email: martha at amsat.org.

The trip will include a round trip bus from the hotel and entrance
to the Space Center. The cost will be about $100. This is a wonderful
experience for those that haven't been and for those that have been
multiple times. We need to get an idea of how many will participate
to select the correct bus.

[ANS thanks Dan Schultz, N8FGV for the above information]

Japan to Launch Student High-Voltage Satellite Horyu-2 in May 2012

HORYU-2, an amateur radio satellite built by students at the Kyushu Institute of Technology (KIT) in Japan will launch aboard a Japanese H-IIA rocket planned for May 17 at 1639-1642 UT.

This Cubesat includes several experiments:
+ 300 volt power generation in LEO
+ COTS technology demonstration of surface potential measurement
+ Orbital debris observation
+ Earth photography

The satellite downlink will be 437.375 MHz using 1200bps FSK and CW.

300 volt power generation in LEO

Power generation in space in practice is limited to 160 volt generation with 120 volt transmission aboard the ISS due to electrostatic potential of the solar array with respect to its platform. High power generation will require heavier cables or increased loss due to resistances. Future high power generation in LEO will require 300-400 volts. The HORYU-2 mission, 300V power generation in space without any discharge, is the first space environment test of the new technology.

COTS technology demonstration of surface potential measurement
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A contact surface potential meter developed by TREK, Inc. for terrestrial commercial application will be flown. This is a high impedance meter which will not affect the charge state of the object being tested. As HORYU-2 passes through the aurora zone, differential charges may develop between the insulator surface and the satellite chassis. The potential meter will measure the potential of the insulator that is the same material to be used for SCM. The two measurements are compared to validate against each other.

Orbital debris observation

This experiment will detect micro-debris impact on the surface of HORYU-2. The debris sensor consists of many conductive thin wired laid down in parallel in the area of 8 8 cm. Upon impact, some of the lines are cut and the resistance becomes infinite.

Earth photography

A small CMOS camera, developed by the University of Surrey, called the Surrey Camera Payload (SCAMP) will take pictures in JPEG format at 640 480 pixels. From 700km altitude, one pixel will correspond to 1.6km.

More information is available on the web:
Horyu website in Google English: http://tinyurl.com/HoryuSatellite
http://www.uk.amsat.org/6638
http://www.uk.amsat.org/4279

[ANS thanks the Horyu-2 team and AMSAT-UK for the above information]

Satellite Export Controls - Progress Report

Since the inception of The International Traffic in Arms Regulations (ITAR) in 1999, all US-built satellites have been subject to the US Munitions List, including amateur radio, education and university satellite projects. The Directorate of Defense Trade Controls (DDTC) under the Department of State (DoS) manages ITAR. ITAR has curtailed AMSAT's collaboration with foreign nationals on Amateur Radio Satellite projects, as well as with universities that have foreign students enrolled as any technical exchanges concerning satellite technology with non-US citizens brought the potential for Federal prosecution.

On November 1, 2011, Congressman Howard L. Berman (D-CA) introduced H.R. 3288: "Safeguarding United States Satellite Leadership and Security Act." In summary, this act would authorize the President to remove commercial satellites and related components from the United States Munitions List. However, while AMSAT was pleased to see this draft bill, there were concerns that "commercial satellites" could be interpreted as not including amateur radio and education satellites.

Consequently, earlier this year AMSAT President Barry Baines, WD4ASW appointed AMSAT NY Area Coordinator Peter Portanova, WB2OQQ as AMSAT's Congressional Liaison to establish relationships that would put AMSAT on the radar regarding H.R. 3288 to ensure that amateur radio and education satellites would be included in the final bill. Peter's appointment was based in part on his success in leading a delegation to meet with Congressman Peter King on H.R. 607 in 2011 that resulted in the amendment of that bill to protect the amateur and amateur satellite frequencies that were being considered for auction. Peter was clearly qualified to lead AMSAT's efforts to ensure that amateur radio and education satellites would be included in such a bill. Peter notes, "What we accomplished on 607 validates that 'grass roots' efforts can be successful". Over the past few months, AMSAT, under Peter's guidance has taken steps to meet with key personnel involved in the legislative process in Washington to make them aware of AMSAT, the importance of amateur radio satellites in the development of education outreach and potential for emergency communications. All of these meetings have been successful in building awareness of the need to have amateur radio satellites (as well as education satellites) removed from the US Munitions List and placed under the Department of Commerce Control List.

While H.R. 3288 has been referred to the House Committee on Foreign Affairs, this initiative was being held up pending a joint report from the Department of Defense (DoD) and Department of State (DoS) required by Section 1248 of the FY2010 Defense Authorization Act wherein Congress directed DoD to assess whether national security would be negatively impacted by moving satellites from the US Munitions List (USML) to the Commerce Control List (CCL). Clearly, the politicians were awaiting this report before deciding whether to support H.R. 3288.

On April 18, 2012 the long awaited "1248" report was released by DoD and DoS: "Risk Assessment of United States Space Export Control Policy," that addresses the risks associated with removing satellites and related components from the United States Munitions List (USML).

The report identifies several satellite types, and related items, that are not purely defense-related and should not be designated as defense articles on the USML or controlled under the Internation-

al Traffic in Arms Regulations (ITAR).

The Departments recommended that the following items are more appropriately designated as dual-use items on the Commerce Control List (CCL) and controlled under the Export Administration Regulations (EAR):

(1) Satellites that do not contain technologies unique to military applications or critical for maintaining a military edge;
(2) Communications satellites (COMSATs) that do not contain classified components;
(3) Remote sensing satellites with performance parameters below certain thresholds; and
(4) Systems, subsystems, parts and components associated with those satellites.

>From AMSAT's perspective, this is certainly good news for the satellite industry from both a commercial and amateur radio/education perspective. In particular, placement of amateur radio satellites under EAR would remove the most onerous impacts of ITAR, allowing for example, free exchange of technical information with foreign nationals, allowing collaboration on satellite projects. Actual export of hardware, however, would be controlled by the Department of Commerce. That said, it is too early to draw any conclusions as a 180-day review process has now begun. If the recommendations of the "1248 Report" are accepted, it could pave the way for H.R. 3288 or a bill drafted in response to the "1248 recommendations" to move forward. However, given the tendency of Congress to put off major decisions from May onward pending Fall elections, AMSAT President Barry Baines, WD4ASW believes that it is likely, based on the current Congress and other factors, very little will occur within the 112th Congress. In Barry's words, "We are pleased with our initiatives to this point; however these activities are still a work in progress." The AMSAT Board, along with AMSAT's Congressional Liaison, will stay focused on these activities and report to the membership as information becomes available.

The 44 page "Department of Defense/Department of State Report to Congress Section 1248 of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111 - 84): RISK ASSESSMENT OF UNITED STATES SPACE EXPORT CONTROL POLICY" is available on-line in PDF format at: http://tinyurl.com/DoD-1248-Report

Bloomberg Business Week article on ITAR:
http://tinyurl.com/BusinessWeek-ITAR (www.businessweek.com)

(ANS thanks AMSAT President Barry Baines, WD4ASW and AMSAT Congressional Liaison Peter Portanova, WB2OQQ for this report.)

New Proposal Cycle for ARISS-US Contacts

NASA Teaching From Space (TFS) office has announced a new proposal cycle for ARISS-US contacts. Proposals may be submitted in the time period between April 23 through July 2, 2012 for contacts that will be scheduled beginning in January 2013.

Informational sessions will be held to answer any questions concerning the proposal process. To attend a session or to have questions answered, contact TFS at JSC-TFS-ARISS@mail.nasa.gov or call 281-244-1919.

For more information, see the TFS Web site:
http://tinyurl.com/ARISS-Proposal-Cycle (www.nasa.gov)

If you represent an education organization, formal or informal, and you are located in the United States or its territories, you can submit a proposal.

If you are located outside of the U.S., you will need to contact the ARISS representative for your region:

+ Europe, Africa, and the Middle East: Francesco De Paolis, IK0WGF school.selection.manager@amsat.it.

+ Russia: Valeriy Agabekov, N2WW/UA6HZ n2ww@arrl.net.

+ Japan and all countries in Southeast Asia and Pacific Oceania: Keigo Komuro, JA1KAB iaru-r3@jarl.or.jp.

+ Canada and all other countries: Maurice-Andr Vigneault, VE3VIG ve3vig@amsat.org.

[ANS thanks the NASA Teaching From Space Office for the above information]

Satellite Shorts From All Over

+ The ARISS International Team monthly teleconference was held on Tuesday, April 17. World Amateur Radio Day and the HamTV status were discussed. Minutes have been posted to the ARISS site: http://ariss.rac.ca/arisstel2012-04-17.htm

+ A video segment of the successful ARISS contact with Flabob Airport will be aired on the Bob Heil & Gordon West "Ham Nation" show on May 1, 2012 at 1800 PDT (UTC-7). Tune in at: http://www.twit.tv/hn

+ ESA's mysteriously silent Envisat Earth observing satellite has been observed and imaged by another satellite in space. France's space agency (CNES) pulled off an on-orbit coup, using their high-resolution Pleiades satellite to take a picture of Envisat from about 100 km. See the satellite-to-satellite view at: http://tinyurl.com/Envisat-Photo (www.universetoday.com)

+ For the last 1000 days the Infrared Array Camera (IRAC), aboard NASA's Spitzer Space Telescope, has been operating continuously to probe the universe from its most distant regions to our local solar neighborhood. To commemorate 1000 days of infrared wonders, the program is releasing a gallery of the 10 best IRAC images: http://www.cfa.harvard.edu/news/2012/pr201211_images.html

+ In celebration of the 22nd anniversary of the NASA/ESA Hubble Space Telescope this month, episode 54 of the Hubblecast gives a slideshow of some of the best images from over two decades in orbit, set to special music: http://www.spacetelescope.org/videos/archive/category/hubblecast/

+ JD1/OG, OGASAWARA ISLAND, AS-031
Makoto,JI5RPT, is working from Chichijima Islands (IOTA AS-031) signing JD1BLY in CW/SSB/digital modes on 80-6m and via satellite

also from April 29 until May 5. QSL via homecall.
See: http://www.ji5rpt.com/jd1 and http://twitter.com/jd1bly
(via DXNL DX Newsletter 1777 - Apr 25, 2012)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Lee McLamb, KU4OS